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March 7, 1991

EH-25

Environmental Assessment for the Surface Water Interim Measures/Interim Remedial Action for Operable Unit 2/South Walnut Creek at the Rocky Flats Plant, Golden, Colorado

Leo P Duffy, Director
Office of Environmental Restoration
and Waste Management

This is in response to your February 22, 1991, request for approval of the subject environmental assessment (EA) and issuance of a finding of no significant impact for proposed surface water interim remedial actions to be conducted in the South Walnut Creek Basin at Operable Unit 2 at the Rocky Flats Plant.

The Office of Environment, Safety and Health has reviewed the Proposed Surface Water Interim Remedial Measures/Interim Remedial Action Plan/Environmental Assessment (IM/IRAP/EA) and Decision Document, South Walnut Creek Basin, Operable Unit No. 2 in accordance with our responsibilities under Department of Energy Order 5440.1D regarding compliance with the National Environmental Policy Act (NEPA). The document adequately integrates the documentation requirements of NEPA and the Comprehensive Environmental Response, Compensation, and Liability Act, in accordance with DOE Order 5400.4. We understand that the State of Colorado was provided and has declined an opportunity to review and comment on the pre-approval EA. Please note our remaining minor comments on the attached markup, including our assignment of the DOE NEPA document number "DOE/EA-0496."

Based upon my staff's review and recommendations, with incorporation of the recommended changes, and after consultation with the Office of General Counsel, I have determined that the IM/IRAP/EA is adequate for publication and that the proposed action is not a major Federal action significantly affecting the quality of the human environment, within the meaning of NEPA. Therefore, the preparation of an environmental impact statement is not required. The basis for the determination is explained in the attached FONSI.

The Office of Environmental Restoration and Waste Management is responsible for providing public notice of the availability of the IM/IRAP/EA and FONSI as required in Section

MHS 20

1506.6(b)(3) of the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA. Please send five copies of the document and a copy of the distribution list to the Office of NEPA Oversight for our files.

Paul L. Ziemer, Ph.D.
Assistant Secretary
Environment, Safety and Health

cc: R. Scott, EM-20
NEPA Compliance Officer

R. Schassburger, RF
NEPA Compliance Officer

DEPARTMENT OF ENERGY
FINDING OF NO SIGNIFICANT IMPACT

SURFACE WATER INTERIM MEASURES/
INTERIM REMEDIAL ACTION PLAN
FOR THE
903 PAD, MOUND, AND EAST TRENCHES AREAS
(OPERABLE UNIT NO. 2)

ROCKY FLATS PLANT
GOLDEN, COLORADO

AGENCY: Department of Energy

ACTION: Finding of No Significant Impact

SUMMARY: The Department of Energy (DOE) is preparing to construct and operate a surface water collection and treatment system as part of an Interim Measures/Interim Remedial Action (IM/IRA) at Operable Unit No. 2 (OU 2) at the Rocky Flats Plant (RFP). Surface water at OU 2 has been found to contain organic, radionuclide and metal contaminants. The DOE has prepared a Surface Water Interim Measures/Interim Remedial Action Plan/Environmental Assessment (IM/IRAP/EA) to evaluate the environmental effects of the proposed action and reasonable alternatives. The proposed action involves a system to divert and collect contaminated surface water from identified OU 2 seeps and drainages. The collected water would be transported by truck and/or pipeline to a surface water treatment facility, processed and released to South Walnut Creek. Several alternative treatment technologies were evaluated in the IM/IRAP/EA. Chemical precipitation cross-flow membrane filtration together with a granular activated carbon (GAC) adsorption system has been selected as the preferred treatment alternative. Laboratory and field treatability studies are being implemented in order to verify performance of this technology.

The proposed Surface Water IM/IRA is intended to provide interim cleanup of contaminated OU 2 surface water under an interim action that is compatible with long-range plans to clean up the RFP site. The environmental effects, presented

in Sections 7 and 8 of the IM/IRAP/EA, indicate that the risks associated with the proposed collection and treatment of contaminated surface water are low.

Based on the analyses in the IM/IRAP/EA, DOE believes that the proposed action is not a major federal action significantly affecting the quality of the human environment, within the meaning of the National Environmental Policy Act (NEPA) of 1969. Therefore, DOE has issued this finding of no significant impact.

ADDRESSES AND FURTHER INFORMATION: Persons requesting additional information regarding the proposed Surface Water IM/IRA project should contact:

Beth Brainard
Public Affairs Officer
U.S. Department of Energy
Rocky Flats Plant
P.O. Box 928
Golden, Colorado 80402-0928
(303) 966-5993

For general information on the NEPA process for the proposed Surface Water IM/IRA, please contact:

Carol M. Borgstrom, Director
Office of NEPA Oversight
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585
(202) 586-4600

SUPPLEMENTARY INFORMATION

BACKGROUND: The RFP is a part of the national nuclear weapons research, development, and production complex administered by DOE. A January 22, 1991, Federal Facility Agreement and Consent Order (FFACO) among DOE, the Environmental Protection Agency (EPA), and the State of Colorado, defines OU 2 as several Individual Hazardous Substance Sites formerly known in the aggregate as the 903 Pad, Mound, and East Trenches Areas. In March 1987, a Phase I Remedial

Investigation (RI) began at OU 2. The investigation consisted of the preparation of detailed topographic maps, radiometric and organic vapor screening surveys, surface geophysical surveys, a soil gas survey, a boring and well completion program, soil sampling and surface water and groundwater sampling. Phase I field activities were completed at OU 2 during 1987, and a draft RI report was submitted to the EPA and the Colorado Department of Health (CDH) on December 1, 1987. Phase I data did not allow adequate definition of the nature and extent of contamination for the purpose of conducting a feasibility study of remedial alternatives pertaining to OU 2 contaminated media. A draft Phase II Sampling and Analysis Plan that presents the details and rationale for further field work to achieve this objective was submitted to the regulatory agencies in June 1988. This draft sampling and analysis plan was subsequently revised and submitted as a final Phase II RCRA Facility Investigation/Remedial Investigation Feasibility Study (RFI/RIFS) sampling plan in April 1990. The plan was approved by EPA in May 1990.

Phase I data, and more recently collected data presented in the final Phase II RFI/RIFS plan, indicate contamination of surface water at OU 2 by volatile organic compounds (VOCs), inorganics and radionuclides. In February and March 1990, representatives from DOE, EPA, and CDH met to discuss surface water interim remedial actions at the RFP site. The result of these meetings was a series of general agreements to implement an IM/IRA for the cleanup of contaminated OU 2 surface water. Subsequent meetings were held to agree on schedules for this activity. The proposed action would allow for the collection and treatment of contaminated surface waters potentially impacted by previous on-site storage practices, and permit the discharge of treated water meeting state and federal standards. Specific point source locations for the collection of surface water and design flow rates are proposed for the interim action.

There is no immediate threat to public health or the environment posed by this contamination because the affected surface water is contained within the Plant boundary by existing retention ponds, and the water is treated to meet the Plant's National Pollutant Discharge Elimination System (NPDES) permit prior to water discharge. However, there is a potential threat, and DOE is implementing this surface water interim remedial action at the request of EPA and CDH while investigations and engineering studies continue to determine the necessary final remedial actions for OU 2.

This interim remedial action will be conducted in accordance with the FFACO, which incorporates requirements, as applicable, under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986, the Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984, and the National Environmental Policy Act (NEPA) of 1969.

PROPOSED ACTION: The proposed action is to install and operate a surface water collection system for contaminated seeps (or immediately downstream at confluence points) and at an in-stream location on South Walnut Creek, upstream from the existing retention ponds. The collected water will be transported by truck and/or pipeline to a wastewater treatment facility, processed through the treatment facility, and released to South Walnut Creek just downstream of the collection point. The proposed interim action will mitigate downgradient contaminant migration within surface water (and groundwater due to the reduction in contaminated surface water percolation), and the interim action will achieve, to the extent practicable, Applicable or Relevant and Appropriate Requirements (ARARs).

Below-ground sumps will be installed at designated collection stations and the collected water transferred to a treatment facility by truck or newly installed pipelines. The use of trucks or pipelines is dependent on the flowrate generated by the collection system with pipelines being reserved for the collection stations generating the higher volumes of water. Water collection by truck from low flow seeps is anticipated to require an average of 50 miles of travel per week by a tank truck.

The collection system and treatment facility are designed to handle base flow rates and not maximum flow events. A "base flow rate" is defined as the maximum observed flow, excluding flows related to high precipitation events. The design flow for the total surface water collection system is 51.5 gallons per minute (GPM). The total average annual flow of collected water is conservatively estimated to be 20 GPM.

A chemical precipitation with cross-flow membrane filtration system, together with a GAC adsorption system, has been selected as the preferred treatment technology. This will allow for discharge of the treated water in compliance with state and federal water standards. The treated water will be discharged to South Walnut Creek, immediately downstream of the contaminated surface water collection point. Treated water will be monitored to ensure contaminants are within regulatory requirements. The secondary wastes from water treatment will be handled as a hazardous mixed waste until otherwise determined, and the wastes treated or disposed of in a manner consistent with current RFP disposal procedures.

Manpower requirements for the proposed operation of the treatment plant are minimal. It is estimated that the treatment plant will require manpower of approximately two (2) hours per shift to monitor operations and perform necessary functions to keep the plant operational. The proposed system offers a high

degree of worker protection by incorporating numerous health and safety design considerations (trailer venting, alarm/emergency shutdown systems, automated clean-in-place equipment, etc.). Worker training will further minimize potential for accidents and potential adverse health effects.

Although the IM/IRAP/EA demonstrates that the risks associated with the proposed operation of a surface water collection and treatment system are low, DOE is continuing to evaluate alternative treatment technologies. Treatability studies will be conducted prior to the start of the interim remedial action to confirm the selection of the preferred treatment system or to identify a superior alternative, if developed.

ALTERNATIVES CONSIDERED: Alternatives to the proposed action discussed in the IM/IRAP/EA include the No Action alternative, other treatment technologies for suspended solids removal, and other treatment technologies for radionuclide and organic constituent removal.

Under the No Action alternative, onsite contaminated surface water would not be collected and pretreated. Contaminated water would continue flowing downstream to the existing onsite retention ponds where it is treated to meet the NPDES permit. The no-action alternative may pose a long-term offsite release risk to the general public, and may require an increase in the scope of remedial actions in the future.

Alternative treatment technologies were evaluated based on effectiveness, implementability and costs. Chemical precipitation with cross-flow membrane filtration and granular media filtration were evaluated for suspended solids removal. Cross-flow membrane filtration and ion exchange were evaluated for radionuclides and metals removal. Activated carbon adsorption, ultraviolet/ peroxide oxidation, and air stripping with off-gas treatment were evaluated for

organic contaminant removal. The selected treatment system utilizing the chemical precipitation with cross-flow membrane filtration system and the activated carbon system was the best choice based on available surface water quality data, literature information on expected performance, and best engineering judgment.

ENVIRONMENTAL CONSIDERATIONS: The Surface Water IM/IRAP/EA evaluated the environmental impacts to air quality, water quality, terrestrial features (including wildlife and wetlands), archaeology and historic sites, and short- and long-term land productivity from the proposed preferred alternative.

Air quality impacts are considered overall to be insignificant. Construction activities will require leveling a pad area, installation of sumps, and installation of pipelines for the proposed surface water treatment facility. Although some dust will be generated as a result of construction and operational activities, these dusts will be controlled as specified in the Health and Safety Program Plan for environmental restoration activities and the draft Plan for Prevention of Contaminant Dispersion (currently under review by EPA and CDH). Impacts from dermal exposure, inhalation, and inadvertent ingestion by workers of airborne radioactivity and VOCs on fugitive dusts would be insignificant.

The maximum dose to a member of the public from radioactive contaminants present in dust generated during construction activities would be 2×10^{-3} mrem committed effective dose equivalent (CEDE). The maximum incremental cancer risk to a member of the public due to phthalate and metal contamination from fugitive dust was calculated to be 6×10^{-8}. The cumulative incremental cancer risk to members of the public from radioactive and nonradioactive hazardous chemical contamination associated with construction activities would be insignificant.

The proposed interim action will improve the surface water quality at the RFP site. Surface water flows exceeding the design capacities of the system may create some sediment transport by surface runoff ending in open waters on site. However, the amount of water exceeding the design capacity of the collection system is projected to be minimal.

South Walnut Creek is one of six ephemeral streams traversing the RFP. Water diverted from the stream for treatment will be reintroduced immediately downstream of the collection point within 48 hours. No long-term impacts to the creek and its associated wetlands are expected. Any short-term impacts to wetlands from installation of sumps or ditch modifications would be minor and reversible.

Terrestrial impacts to plant and animal life are expected to be insignificant in that all activities will take place on or near previously disturbed areas onsite at RFP. No animals found onsite are classified as rare or endangered.

It is not anticipated that the proposed action would impact cultural resources such as potential archaeological and historical sites at the RFP site. The State Office of Archaeology and Historical Preservation has determined that this action will not impact cultural resources of this highly disturbed site.

The short- and long-term land productivity will not be impacted by the proposed IM/IRA. Portions of land within OU 2 are currently undeveloped and will remain so for the reasonably foreseeable future as part of the RFP. All of OU 2 lies within the RFP security boundaries and it is not accessible to the general public.

ROUTINE OPERATIONS: Analyses were conducted to assess worker and public exposures to radiation and hazardous chemicals during routine operations.

Routine operation of the treatment system is expected to result in insignificant exposure to site workers or the general public. Personal protective measures may be beneficial during some routine operations where there is a potential for contact with contaminated water (e.g., routine water sampling or solids removal in the treatment facility). When such operations are taking place, the appropriate protective measures will be specified in the Operational Safety Analysis procedures.

The proposed action will require transportation during the construction and operations phases. Construction traffic would involve routine construction materials and although an increase in traffic may be noticeable onsite, it would be of short duration and environmentally insignificant. Any increased volume of offsite transportation during construction and operations phases would be unnoticeable when compared to other transportation. Low concentrations of contaminants and solidification of waste materials, and compliance with Department of Transportation (DOT) packaging/ transport requirements and waste disposal site acceptance criteria would render insignificant any risk associated with offsite transportation of wastes.

ACCIDENT SCENARIOS: Accidents scenarios were analyzed to estimate potential radiological and hazardous chemical exposure to workers or members of the public. These included fires or spills of contaminated water. Spills of untreated water within the treatment facility would create the potential for short-duration airborne VOCs. Uptake of contaminants by workers involved in the cleanup would be minimized by following safety precautions specified in the Site-specific Health and Safety Plan. Any airborne VOC releases through ventilation systems that could lead to exposures of other RFP employees or the public would be extremely limited and less than those associated with the tank rupture scenario discussed below.

The initiation and propagation of a fire within the treatment facility is a credible accident and the facility trailers are equipped with chemical fire extinguishers. The generated solids are inorganic, in a sludge form containing 60 to 70 percent water and are within metal containers. A fire would have to breach the metal containment as well as dry out and aerosolize the solids to result in a radioactive release. The EA discussion indicates that fire duration and intensity would be insufficient to result in a radioactive material release.

Based on the maximum amount of contaminants potentially available for release and the dispersible form of the contaminants, the most severe accident with potential for the exposure of either site employees or the public would be the rupture of the 5,000-gallon water collection tank and consequent release of VOCs to the air. The concentration of VOCs contained in the collection tank would be low, however, and while airborne levels of VOCs would be elevated near the accident, workers would be aware of the event and would either evacuate or take protective measures. Radionuclides present in the water are not volatile, nor readily absorbed through the skin, and would not be present in concentrations that would pose a significant risk to workers.

Transportation of contaminated water or filter press solids (sludge) by truck would pose a smaller accident concern than the tank rupture because of the lower volume that could potentially be released. All onsite transportation activities would occur at low speeds and in accordance with the Onsite Transportation Manual. As previously mentioned, all offsite transportation is conducted in accordance with DOT packaging and transport requirements. Risk from accidents associated with transportation of feed and waste materials associated with the proposed action would be environmentally insignificant.

DETERMINATION: Based on the information and analyses in the EA section of the IM/IRA, DOE believes that the proposed action does not constitute a major federal action significantly affecting the quality of the human environment, within the meaning of NEPA. Therefore, DOE has determined that preparation of an environmental impact statement is not required.

Issued at Washington, D.C., this 27th day of March 1990.

Paul L. Ziemer, Ph.D.
Assistant Secretary
Environment, Safety and Health

DOE/EA-0496

FINAL

PROPOSED SURFACE WATER INTERIM MEASURES/ INTERIM REMEDIAL ACTION PLAN/ ENVIRONMENTAL ASSESSMENT AND DECISION DOCUMENT

SOUTH WALNUT CREEK BASIN

OPERABLE UNIT NO. 2

U.S. DEPARTMENT OF ENERGY

Rocky Flats Plant
Golden, Colorado

ENVIRONMENTAL RESTORATION PROGRAM

January 1991

Volume I - Text

infrequent high flow periods resulting from high precipitation events. As discussed herein, the South Walnut Creek Basin IM/IRA design flow is 60 gallons per minute (gpm). The average annual flow rate from SW-59, SW-61, and SW-132 should be less than 20 gpm, however.

This IM/IRA will be conducted in accordance with the Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA); the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986, the National Environmental Policy Act (NEPA) of 1969; and DOE NEPA guidelines (52 FR 47662-47676, December, 1987) ~~Order 5440.1C (DOE, 1985)~~. DOE and EG&G have prepared this IM/IRAP/EA to identify and evaluate interim remedial action alternatives for contaminated surface water in the South Walnut Creek drainage basin. Based on the evaluations, a preferred surface water collection and treatment system is recommended. DOE will implement this IM/IRA while work progresses on the RCRA Facility Investigation/CERCLA Remedial Investigation (RFI/RI) and RCRA Corrective Measures Study/CERCLA Feasibility Study (CMS/FS) for OU 2.

Having presented the general extent of the contamination within the South Walnut Creek Basin and the specific environmental issues associated with surface water contamination, this plan subsequently presents an evaluation of the remedial alternatives with respect to effectiveness, implementability, and costs. Effectiveness includes ability to meet Applicable or Relevant and Appropriate Requirements (ARARs). It must be noted, however, that in accordance with the National Contingency Plan (NCP) and the IAG, IM/IRAs need only attain ARARs to the greatest extent practicable.

Surface water will be collected at one seep and at two in-stream locations on South Walnut Creek upstream of the existing detention ponds. This will reduce the potential for further downstream contamination. Screening of surface water treatment technologies includes evaluation of: suspended solids, radionuclides, and metals removal by chemical treatment/cross-flow filtration, granular media filtration, and ion exchange, and evaluation of volatile organic contaminant removal by granular activated carbon (GAC) adsorption, ultraviolet peroxide oxidation, and air stripping with off-gas treatment. The chemical precipitation/cross-flow membrane filtration system, together with a GAC adsorption system, is selected as the preferred alternative. Laboratory

and field treatability studies are being implemented in order to verify the performance of the selected alternative. The current schedule for the field treatability studies calls for installation of a pilot system by 1991. The field treatability unit will be operated to evaluate performance against chemical-specific ARAR results may indicate that it is not practicable to attain all ARARs for the Surface Water IM/IRA. performance requirements for the IM/IRA will require approval by the regulatory agencies. An adc function of the field treatability unit is the characterization and quantification of residuals generated treatment processes being operated, thus allowing confirmation or modification of assumptions made IM/IRA Plan regarding the nature of treatment residuals. Table D-1, Appendix D, shows the milestone schedule as proposed in the draft IAG for the South Walnut Creek Basin Surface Water IM/IRA project.

IM/IRAP/EA examined

The ~~remainder of this plan addresses the NEPA aspects of this project. Specifically,~~ the environmental and health risks associated with each of the alternatives, including the preferred alternative, ~~are examined~~ in accordance with the requirements of NEPA. The results of this evaluation illustrate that the potential negative impacts to air and water quality, land, and short- and long-term land productivity, as well as exposure of personnel, are minimal compared to the benefits of the resulting water quality improvements to the surface waters of the area. It should be noted that this finalized IM/IRAP document is also an EA. Although the 26 September 1990 proposed IM/IRA Plan contained all the information and assessments to make it an EA, it had not been approved as an EA by DOE Headquarters and therefore could not be labeled as an EA. However, in the Executive Summary of the 26 September 1990 proposed IM/IRA Plan, it was noted that once public comment was received and DOE Headquarters approved the NEPA aspects of the document, it would become an integrated CERCLA/RCRA - NEPA document (IM/IRAP/EA).

This discussion is not necessary as EA is now final approved.

SECTION 1

INTRODUCTION

Water quality investigations have identified the presence of volatile organic compound (VOC) and radionuclide contamination of surface water at the Rocky Flats Plant (RFP). The subject Interim Measures/Interim Remedial Action Plan/Environmental Assessment (IM/IRAP/EA) addresses contaminated surface water in a portion of the South Walnut Creek drainage basin located within an area identified as Operable Unit No. 2 (OU 2). There is no immediate threat to public health and the environment posed by surface water contamination because the affected surface water is contained within the plant boundary by existing detention ponds, and is treated prior to discharge for removal of volatile organic contaminants and suspended particulates to which radionuclides, if present, are likely to adsorb. However, there is a potential threat and the Department of Energy (DOE) is implementing this Surface Water Interim Measures/Interim Remedial Action (IM/IRA) at the request of U.S. Environmental Protection Agency (EPA) and Colorado Department of Health (CDH). Implementation of the Surface Water IM/IRA will enhance the DOE's efforts towards containing and managing contaminated surface water, and will mitigate downgradient migration of contaminants. Another factor in implementing this IM/IRA is the length of time it will take to complete the investigations and engineering studies necessary to determine the final remedy for OU 2.

In February and March 1990, representatives from DOE, EPA, CDH met to discuss surface water IM/IRAs at the RFP site. The result of these meetings was a series of agreements, with the general agreement of all parties, to implement an IM/IRA for the clean-up of contaminated surface water in the area designated as OU 2. OU 2 is defined in the ~~draft~~ January 22, 1991, Environmental Restoration Federal Facility Agreement and Consent Order (FFACO) (DOE, 1990a), commonly known as the Inter-Agency Agreement (IAG), and is comprised of several Individual Hazardous Substance Sites (IHSSs) that were formerly known in aggregate as the 903 Pad, Mound, and East Trenches Areas.

On 28 September 1990, the DOE released for public comment a Surface Water IM/IRA Plan and Decision Document for OU 2. In this Plan, specific point source locations in the South Walnut Creek and

This IM/IRA will be conducted in accordance with the Resource Conservation and Recovery Act of 1976 (RCRA) as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA), the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), the National Environmental Policy Act (NEPA) of 1969, and DOE Order 5400.1C (DOE, 1988). DOE and EG&G have prepared this IM/IRA Plan to identify and evaluate interim remedial action alternatives for contaminated surface water in the South Walnut Creek drainage basin. Based on the evaluations, a preferred IM/IRA for the contaminated surface water is recommended.

This IM/IRA Plan has been prepared to conform with the requirements for an Engineering Evaluation/Cost Analysis (EE/CA) as defined in the National Contingency Plan (NCP) (FR Vol. 55, No. 46, 8813; 40 CFR 300.415[b][4]). It also conforms to the NEPA of 1969, as implemented by regulations promulgated by the President's Council on Environmental Quality (CEQ) (40 CFR 1500-1508), and DOE Guidelines (52 FR 47662-47670, December 15, 1987 ~~10 CFR 1021, DOE Order 5440.1C and 5400.4, DOE/EH-0152~~).

This finalized IM/IRAP document is also an EA. Although the 26 September 1990 proposed IM/IRAP contained all the information and assessments to make it an EA, it had not been approved as an EA by DOE Headquarters and therefore could not be labeled as an EA. However, in the Executive Summary of the 26 September 1990 proposed IM/IRAP, it was noted that once public comment was received and DOE Headquarters approved the NEPA aspects of the document, it would become an integrated CERCLA/RCRA - NEPA document (IM/IRAP/EA).

1.1 BACKGROUND

In March 1987, a Phase I Remedial Investigation (RI) under the Environmental Restoration (ER) Program [formerly known as the Comprehensive Environmental Assessment and Response Program (CEARP)] began at OU 2. The investigation consisted of the preparation of detailed topographic maps, radiometric and organic vapor screening surveys, surface geophysical surveys, a soil gas survey, a boring and well completion program, soil sampling and ground and surface water sampling. Phase I field activities were completed at

at OU 2 will be addressed under a separate IM/IRA Plan. The discussion presented in Section 2 describes the potentially affected environment associated with the proposed IM/IRA and the results of the previous investigations at OU 2. The information included in Section 2 has been derived from the draft RI report and final Phase II RFI/RIFS Sampling Plan.

Section 3 identifies the objectives of the South Walnut Creek Surface Water IM/IRA, Applicable or Relevant and Appropriate Requirements (ARARs) and applicable environmental regulations. The objectives and ARARs define the criteria used to identify and evaluate IM/IRA alternatives.

Section 4 identifies technically feasible IM/IRA alternatives for the collection and treatment of contaminated South Walnut Creek Basin surface water. The IM/IRA alternatives selected address the objectives presented in Section 3. The alternatives are evaluated based on effectiveness, implementability, and cost criteria.

Section 5 summarizes the analysis performed in Section 4, and Section 6 presents the preferred IM/IRA. Bench and field treatability studies to evaluate the performance of the preferred IM/IRA are also discussed in Section 6.

Sections 7 and 8 (specifically address NEPA requirements regarding an analysis of environmental impacts associated with ~~incorporate NEPA documentation regarding the EA of~~ the preferred IM/IRA and other IM/IRA alternatives, respectively. This analysis is intended to provide sufficient information to aid in a NEPA determination ~~(i.e., Finding of No Significant Impact)~~ of environmental impacts of the proposed IM/IRA. The scope of the analysis does not include evaluation of the existing operations at the RFP, final remedial actions at OU 2 or subsequent remedial actions at other locations of the RFP. The environmental impacts of plant operation were previously analyzed in the final Environmental Impact Statement (EIS) (DOE, 1980). NEPA documentation for final remedial actions at OU 2 and any other RFP remedial actions will be provided in future documents.

TABLE D-1

FEDERAL FACILITY AGREEMENT AND CONSENT ORDER
MILESTONE SCHEDULE*

SOUTH WALNUT CREEK BASIN
OPERABLE UNIT NO. 2

SOUTH WALNUT CREEK BASIN INTERIM MEASURE/INTERIM REMEDIAL ACTION PLAN/ENVIRONMENTAL ASSESSMENT (IM/IRAP/EA) AND DECISION DOCUMENT

Submit Draft Proposed IM/IRA Decision Document	June 19, 1990
Submit Proposed IM/IRA Decision Document to EPA/CDH	September 18, 1990
Public Review of Proposed IM/IRA Decision Document	September 25, 1990
Submit Draft Responsiveness Summary and Final IM/IRA Decision Document	January 11, 1991 ~~December 13, 1990~~
Field Treatability Test System Installation Complete	March 8, 1991
Begin Field Treatability Testing	March 11, 1991
Complete IM/IRA Construction	September 30, 1991
Begin Field Treatability Testing (Entire System)	October 30, 1991
Submit Draft Treatability Test Report	April 1, 1992
Submit Final Treatability Test Program Report	June 2, 1992
Complete Interim Measure/IRA Construction	Sept 30, 1991
Begin Field Treatability Testing [Entire System]	Oct 31, 1991

Final IAG of January 22, 1991

* Source: "Federal Facility Agreement and Consent Order," U.S. Department of Energy, August 17, 1990.